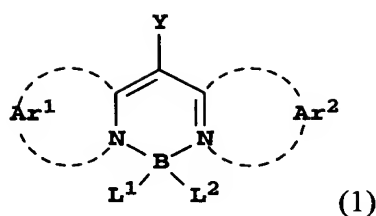


CLAIMS:

1. An electroluminescent device comprising a light emitting layer comprising a boron complex wherein the boron is bonded to a nitrogen atom of a 6-membered heteroaromatic ring group and to a nitrogen atom of a 5-membered heteroaromatic ring group, provided that the 5- and 6-membered heteroaromatic ring groups are further connected by a methene bridge to form a 6-membered ring, and provided further that the 5-membered heteroaromatic ring contains at least one additional heteroatom that is divalent or trivalent.
2. The device of Claim 1, wherein the additional heteroatom is a N, O, S, Se, or Te atom.
3. The device of Claim 1, wherein the additional heteroatom is a N, O or S atom.
4. The device of Claim 1, wherein the five-membered ring is fused to an additional aromatic ring group.
5. The device of Claim 1, wherein the five-membered ring is fused to an additional aromatic ring group and the six-membered ring is fused to an additional aromatic ring group.
6. The device of Claim 1, wherein the methene bridge is substituted with cyano substituent, an aryl group, a heteroaryl group, or an alkyl group.
7. The device of Claim 1, wherein the boron complex is represented by Formula (1),



wherein:

Ar¹ represents the atoms necessary to form a six-membered
heteroaromatic ring;

Ar² represents the atoms necessary to form a five-membered
heteroaromatic ring that contains at least one additional
heteroatom that is divalent or trivalent;

L¹ and L² represent independently selected substituents;

Y represents hydrogen or a substituent.

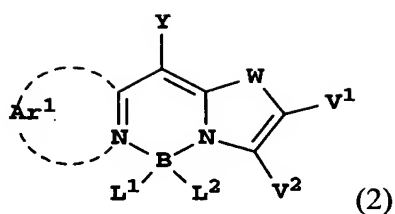
8. The device of Claim 7, wherein, Ar¹ represents the atoms
necessary to form pyridine ring group.

9. The device of Claim 7, wherein, Ar² represents the atoms
necessary to form an imidazole ring group, an oxazole ring group, a thiazole ring
group, or a selenazole ring group.

10. The device of Claim 7, wherein Y represents a cyano
substituent, a trifluoromethyl substituent, an aryl group, a heteroaryl group, or an
alkyl group.

11. The device of Claim 7, wherein L¹ and L² represent fluoro
substituents.

12. The device of Claim 1, wherein the boron complex is
represented by Formula (2),



wherein:

W represents O, S, Se, or N-R^a, wherein R^a is a substituent;

V¹ and V² independently represent hydrogen or an

independently selected substituent, provided that V¹ and V² may join together to form a ring group;

Ar¹ represents the atoms necessary to form a six-membered heteroaromatic ring group;

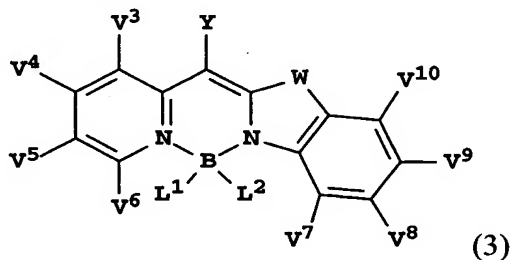
L¹ and L² represent independently selected substituents;

Y represents hydrogen or a substituent.

13. The device of Claim 12, wherein V¹ and V² independently represent an aryl group or an alkyl group.

14. The device of Claim 12, wherein V¹ and V² join together to form an aromatic ring group.

15. The device of Claim 1, wherein the boron complex is represented by Formula (3),



wherein:

W represents O, S, Se, or N-R^a, wherein R^a is a substituent;

V^3-V^{10} independently represent hydrogen or an independently selected substituent, provided that adjacent substituents may join together to form a ring group;

L^1 and L^2 represent independently selected substituents;

5 Y represents hydrogen or a substituent.

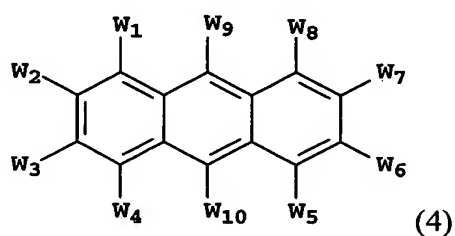
16. The device of Claim 15, wherein W represents S.

17. The device of Claim 15, wherein L^1 and L^2 represent fluoro substituents.

18. The device of Claim 15, wherein, independently, at least
10 two of V^3-V^6 and at least two of V^7-V^{10} combine to form independently selected ring groups.

19. The device of claim 1 wherein the layer comprises a host and dopant where the dopant is present in an amount of up to 10 wt % of the host.

20. The device of claim 1 wherein the host material is
15 represented by Formula (4),



wherein:

20 W_1-W_{10} independently represent hydrogen or an independently selected substituent, provided that two adjacent substituents can combine to form rings.

21. The device of claim 20 wherein W^9 and W^{10} independently represent naphthyl groups.

22. The device of claim 20 wherein W^9 and W^{10} represent a naphthyl group and a biphenyl group.

5 23. The device of claim 20 wherein W^9 represents a biphenyl group.

24 The device of claim 1 wherein the boron complex is between 0.5 and 8% by volume of the light-emitting layer.

10 25. A display comprising the electroluminescent device of claim 1.

26. The device of claim 1 wherein white light is produced either directly or by using filters.

27. An area lighting device comprising the electroluminescent device of claim 1.

15 28. A process for emitting light comprising applying a potential across the device of claim 1.